Docket No.: 21058/0206800-US0
(PATENT)

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Letters Patent of:
Andrew Arthur Berlin et al.

Patent No.: 7,302,832

Issued: December 4, 2007

For: USE OF ARRAYS OF ATOMIC FORCE MICROSCOPE/SCANNING TUNNELING MICROSCOPE TIPS TO SCAN NANOCODES

REQUEST FOR CERTIFICATE OF CORRECTION
PURSUANT TO 37 CFR 1.323 AND 1.322

Attention: Certificate of Correction Branch
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Dear Sir:

Upon reviewing the above-identified patent, Patentee noted typographical errors which should be corrected. A listing of the errors to be corrected is attached.

The typographical errors marked with an "A" on the attached list are found in the application as filed by applicant. Payment in the amount of $100.00 covering the fee set forth in 1.20(a) is enclosed.

The typographical errors marked with a "P" on the attached list are not in the application as filed by applicant. Also given on the attached list are the documents from the file history of the subject patent where the correct data can be found.

The errors now sought to be corrected are inadvertent typographical errors the correction of which does not involve new matter or require reexamination.

Transmitted herewith is a proposed Certificate of Correction effecting such corrections. Patentee respectfully solicits the granting of the requested Certificate of Correction.

The Commissioner is authorized to charge any deficiency of up to $300.00 or credit any excess in this fee to Deposit Account No. 04-0100.

Dated: June 25, 2008

Respectfully submitted,

By _____

Marie Collazo
Registration No.: 44,085
DARBY & DARBY P.C.
P.O. Box 770
Church Street Station
New York, New York 10008-0770
(212) 527-7700
(212) 527-7701 (Fax)
Attorneys/Agents For Applicant

DARBY & DARBY

Issued Patent Proofing Form File#: **21058/0206800-US0**

Note: **P** = USPTO Error **A**= Applicant Error

US Serial No.: **10/748,526** US Patent No.: **US 7,302,832 B2** Issue Date: **Dec. 4, 2007**

Title: **USE OF ARRAYS OF ATOMIC FORCE MICROSCOPE/SCANNING TUNNELING MICROSCOPE TIPS TO SCAN NANOCODES**

S. No.	P/A	Original		Issued Patent		Description of Error
		Page	Line	Column	Line	
1	A	Page 5 Claims (06/21/2007)	Claim 33 Line 13	8	46	In Claim 17, after "portion" insert - - of - -.
2	P	Page 5 Claims (06/21/2007)	Claim 36 Line 2	8	53	In Claim 20, delete "(AEM)" and insert - - (AFM) - -, therefor.

procedure. Modification of markers, such as nanotubes to form nanotube assemblies, are easily detected using surface analysis devices, such as a scanning array of AFM or STM. The method of using carbon nanotubes to mark a signature on reactive molecules permits the larger distribution and smaller molecule size of reactive molecules used in characterization of a sample molecule. The modification of the carbon nanotubes allows the characterization procedure chosen to detect the nanotube markers more easily, thus decreasing characterization errors, and allowing faster characterization speeds.

It is to be understood that the above description is intended to be illustrative, and not restrictive. Many other embodiments will be apparent to those of skill in the art upon reviewing the above description. The scope of the invention should, therefore, be determined with reference to the appended claims, along with the full scope of equivalents to which such claims are entitled.

The invention claimed is:

1. A surface analysis device, comprising:
   - a substrate having a pattern on a surface of the substrate to orient a plurality of nanocodes, each nanocode comprising a tag element and a reactive molecule;
   - a scanning array comprising a plurality of microscopy tips configured to simultaneously scan a plurality of tag elements of the plurality of the nanocodes on the surface of the substrate; and
   - an analyzer coupled with the scanning array configured to receive simultaneously scanned information from the scanning array and utilizing the simultaneously scanned information to identify at least a portion of a sample molecule associated with the nanocodes and removed from the substrate prior to the simultaneous scan of the plurality of the tag elements, wherein the sample molecule is different from the plurality of the nanocodes.

2. The device of claim 1, wherein simultaneously scanning includes measuring the friction characteristics of the substrate and the nanocodes.

3. The device of claim 2, wherein the scanning array includes two or more atomic force microscopy (AFM) tips.

4. The device of claim 3, wherein the scanning array is a 3×3 array of AFM tips.

5. The device of claim 1, wherein the molecules include DNA molecules.

6. The device of claim 1, further comprising a substrate holder.

7. The device of claim 1, wherein the nanocodes include molecular assay labels.

8. The surface analysis device of claim 1, wherein the nanocodes include one or more nanotube assemblies having biochemical, organic or inorganic elements.

9. A surface analysis device, comprising:
   - a substrate holder having a pattern on a surface of the substrate holder to orient a plurality of nanocodes, each nanocode comprising a tag element and a reactive molecule;
   - a scanning array comprising a plurality of microscopy tips proximate the substrate holder configured to move in relation to the substrate holder and simultaneously scan a plurality of tag elements of the plurality of the nanocodes on the surface of the substrate holder; and
   - an analyzer coupled with the scanning array configured to simultaneously scanned information from the scanning array and utilizing the simultaneously scanned information to identify at least a portion of a sample molecule associated with the nanocodes and removed from the substrate prior to the simultaneous scan of the plurality of the tag elements, wherein the sample molecule is different from the plurality of the nanocodes.

10. The surface analysis device of claim 9, wherein the nanocodes include one or more nanotube assemblies having biochemical, organic or inorganic elements.

11. A method of simultaneously scanning nanocodes on a surface of a substrate, comprising:
   - providing nanocodes on the surface of the substrate, each nanocode comprising a tag element and a reactive molecule; and
   - simultaneously scanning the plurality of tag elements of the plurality of the nanocodes using a surface analysis device having a scanning array;
   - wherein the nanocodes include one or more nanotube assemblies having biochemical, organic or inorganic elements.

12. The method of claim 11, wherein simultaneously scanning includes measuring the friction characteristics of the substrate and the nanocodes.

13. The method of claim 12, wherein the scanning array includes two or more atomic force microscopy (AFM) tips.

14. The method of claim 13, wherein the scanning array is a 3×3 array of AFM tips.

15. The method of claim 11, wherein the microscopy tips comprises scanning tunneling microscopy (STM) tips.

16. The method of claim 15, wherein the microscopy tips are a combination of atomic force microscopy (AFM) and scanning tunneling microscopy (STM) tips.

17. A method of accelerated scanning of nanocodes on a surface of a substrate of a surface analysis device, comprising:
   - orienting a sample molecule and associated nanocodes on the surface of the substrate, the sample molecule being different from the plurality of the nanocodes and each nanocode comprising a tag element and a reactive molecule, to preserve orientation of a plurality of tag elements of the nanocodes;
   - removing at least the sample molecule from the surface of the substrate;
   - subsequently simultaneously scanning the plurality of tag elements of the plurality of the nanocodes using a scanning array having two or more microscopy tips;
   - receiving the simultaneously scanned information from the scanning array with an analyzer; and
   - identifying at least a portion the sample molecule associated with the nanocodes.

18. The method of claim 17, wherein the microscopy tips are scanning tunneling microscopy (STM) tips.

19. The method of claim 17, wherein the microscopy tips are atomic force microscopy (AFM) tips.

20. The method of claim 17, wherein the microscopy tips are a combination of atomic force microscopy (AEM) and scanning tunneling microscopy (STM) tips.

21. The method of claim 17, wherein simultaneously scanning includes parallel scanning by the scanning array.

22. The method of claim 17, wherein the nanocodes include one or more nanotube assemblies having biochemical, organic or inorganic elements.

23. A surface analysis device, comprising:
   - a substrate having a surface for placing a plurality of nanocodes, each nanocode comprising a tag element and a reactive molecule;
   - a scanning array comprising a plurality of microscopy tips configured to simultaneously scan a plurality of tag elements of the plurality of the nanocodes on the surface of the substrate; and

PTO/SB/44 (09-07)
Approved for use through 08/31/2010. OMB 0651-0033
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE
Under the Paperwork Reduction Act of 1995, no persons are required to respond to a collection of information unless it displays a valid OMB control number.
(Also Form PTO-1050)

UNITED STATES PATENT AND TRADEMARK OFFICE
CERTIFICATE OF CORRECTION

PATENT NO. : 7,302,832

APPLICATION NO.: 10/748,526

ISSUE DATE : Dec. 4, 2007

INVENTOR(S) : Berlin et al.

It is certified that an error appears or errors appear in the above-identified patent and that said Letters Patent is hereby corrected as shown below:

In column 8, line 46, in Claim 17, after "portion" insert - - of - -.

In column 8, line 53, in Claim 20, delete "(AEM)" and insert - - (AFM) - -, therefor.

MAILING ADDRESS OF SENDER (Please do not use customer number below):
Raj S. Dave, Esq.
DARBY & DARBY P.C.
P.O. Box 770
Church Street Station
New York, New York 10008-0770